

Delaware Department of Transportation

**QUESTIONS AND ANSWERS**

**T201207603.01**

**HEARNS POND DAM IMPROVEMENTS, SUSSEX COUNTY**

**Wednesday, February 03, 2016**

<b>Q #</b>	<b>Question</b>	<b>Answer</b>
29	We did not see and requirement for a protective coating for the steel casing shells for the CIP Concrete Piles indicated on the drawings. Refer to DELDOT Standard Spec Section 618.10. We will bid these as uncoated steel. Please confirm.	<i>Response forthcoming.</i>
28	Bid item 619502 Test Pile Restrike: The unit of measure on the bid form is EADY. Should this bid item be EACH?	Yes, should be EACH.
27	Bid 207501 Sheeting and Shoring: The scope of work for the permanent shoring/ building repairs is not defined enough to bid fairly. The range of permanent shoring can be anywhere between “do nothing” to “total foundation replacement” based on design work that will happen after the bid opening. Can this bid item be made an allowance item to be fair to all bidders?	207501 will remain a bid item.
26	Bid item 2011999 Removal of Structures and Obstructions: There is a vintage truck in one of the buildings to be demolished. Is removal/ relocation of this truck part of the contractor’s scope?	No, the truck will be removed
25	Bid item 602002 Portland Cement Concrete Masonry, Class B: Drawing 19 typical section – Ogee states “Limit of Mass Concrete, see Special Specifications”. The RFP Special provisions has no Mass Concrete section or reference. Please clarify where these special specifications can be found.	Please refer to Sheet 3, Note 18.

Q #	Question	Answer
24	Will horizontal construction joints be permitted in the OGEE spillway to limit the vertical pour thickness to approximately 3' if waterstops are used in the joints? If so, will the mass concrete requirements as outlined in note 18 on plan sheet 3 be waived?	No the ogee is to be constructed per plan.
23	The special provision for items 7125017 and 712522 indicate that type 1 mats are 6" thick and type 2 mats are 7.5" thick. The detail on plan sheet 8 show 6" for type 1 and 9" for type 2. What is the correct thickness of the type 2 mats?	The mats shall consist of tapered open cell blocks. Type 1 blocks shall provide 43 to 50 pounds per square foot (PSF) contact pressure. Type 2 blocks shall provide 65 to 75 PSF contact pressure. These are minimum values. A stability analysis was performed in sizing the Type 1 blocks, limits as shown on the plans. The type 2 blocks, limits as shown on the plans, were arbitrarily upsized to the next larger block size to account for the convergent flow conditions. Any thickness block that provides these 2 contact pressures will be acceptable.
22	Will a specific anchor and anchoring pattern be provided?	Permanent anchors are not required.
21	If dry cast ACB's are permitted will ASTM D 6684 and ASTM D6884 apply?	Yes.
20	Will hydraulic jump testing of the ACB systems be a requirement for this project?	No.
19	Will projection heights of 0.5" for untapered systems and 0" for tapered systems be required in the FOS calculations?	Projection height of 0.0" shall be used for the tapered system in calculating the Factor of Safety.
18	Will a tapered ACB system be specifically called out as shown on the plans?	Yes, the block shall be tapered, see Sheet 8.
17	Will product testing and data analysis per ASTM 7276 and ASTM 7277 be required?	Yes.
16	Will there be a requirement of less than 0.5" of ACB movement during testing due to shifting of the stone drainage layer?	Yes.

Q #	Question	Answer
15	Will hydraulic design data (slopes, velocities and shear) be provided for the Type 1 and Type 2 ACB's systems?	The mats shall consist of tapered open cell blocks. Type 1 blocks shall provide a 43 to 50 pounds per square foot (PSF) contact pressure. Type 2 blocks shall provide 65 to 75 PSF contact pressure. These are minimum values. A stability analysis was performed in sizing the Type 1 blocks, limits as shown on the plans. The type 2 blocks, limits as shown on the plans, were arbitrarily upsized to the next larger block size to account for the convergent flow conditions. No additional design is required unless a substitute is proposed. If a substitute is proposed, the slopes are as shown on the plans, 2H:1V; velocity of 12 FPS; shear of 6.3 PSF.
14	Will polyester cables be allowed?	Yes.
13	Will ACB systems be required to be installed in a manner equivalent to as they were tested (i.e. if tested on a 4" drainage layer then use 4" of 57 stone and if tested on 6" then use 6" of stone in the field installation)?	The 6" minimum thickness of #57 stone shown on the plans shall be maintained, however if the testing for the specific blocks was performed with a greater thickness, then the greater thickness should be used. The geotextile and geogrid are required.
12	What is target Factor of Safety (FOS) for this project?	The mats shall consist of tapered open cell blocks. Type 1 blocks shall provide a 43 to 50 pounds per square foot (PSF) contact pressure. Type 2 blocks shall provide 65 to 75 PSF contact pressure. These are minimum values. A stability analysis was performed in sizing the Type 1 blocks, limits as shown on the plans. The type 2 blocks, limits as shown on the plans, were arbitrarily upsized to the next larger block size to account for the convergent flow conditions. No additional design is required unless a substitute is proposed. If a substitute is proposed the cellular concrete mats shall be designed to a minimum safety factor of 2.0. The analysis shall be performed based upon the stability of the mat due to gravity forces alone, neglecting forces which may be due to cabling, mechanical anchorage, contact with adjacent blocks, or other restraint not attributable to gravity based forces. The stability analysis shall be used in sizing the Type 1 blocks, limits as shown on the plans. The type 2 blocks, limits as shown on the plans, shall be arbitrarily upsized to the next larger block size to account for the convergent flow conditions.

Q #	Question	Answer
11	Which Factor of Safety Methodology (NCMA or CSU) will be required for the calculations?	The cellular concrete mats shall be in accordance with the Factor-of-Safety design methodology as described in NCMA.
10	Will dry cast ACB's be allowed for this project?	Yes.

**Monday, February 01, 2016**

9	Will the geotextile and #57 stone under the boat ramp concrete be measured and paid under items 713002 and 302012 respectively?	Yes.
8	Rebar for the boat ramp is not shown on the Reinforcement Bar Lists in the plans. Will reinforcing steel used in the boat ramp be measured and paid under item 604000?	Yes.

**Friday, January 29, 2016**

7	Is waterstop required in spillway wall vertical joints?	Yes.
6	Is waterstop required in OGEE footer and spillway joints?	Yes.
5	Are the box culvert curbs to be class A or B concrete?	The culvert curbs are Class B concrete.
4	Please clarify the intent of the plans titled "Proposed Embankment Repair Plans" that were recently added to the online bid document files. Are these plans "For Information Only" representing previously completed work by others? Are these drawings intended to be supplemental to the original plan set issued for the project? Is there new work depicted on the "Proposed Embankment Repair Plans"?	Proposed Embankment Repair Plans are for "information only" and represent previously completed work.

**Wednesday, January 27, 2016**

3	Please refer to the joint details on plan sheet 16. Is the membrane waterproofing and protective board shown in these details incidental to item 602736, Precast Concrete Culvert? If so, please provide material specifications. If not, please add a bid item for this work.	<i>Response forthcoming.</i>
2	Is the temporary R6 riprap shown on plan sheet 39 to be measured and paid as item 712022 or is it part of item 909005?	R-6 Riprap, temporary, is to be included in the Lump Sum for Item 909005 Stream Diversion.

Q #	Question	Answer
1	Plan sheet 39 shows a Geotextile-Lined Channel Diversion and Sandbag Dike. The Supplemental Specifications to the August 2001 Standard Specifications, November 24, 2014 Revisions, indicate that these items are to be measured and paid by the CY and CF respectively. However, these items are not included on the bid form. Will the Department add the appropriate bid items for this work?	These items, Geotextile-Lined Channel Diversion and Sandbag Dike, are to be included in the Lump Sum for Item 909005 Stream Diversion.